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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/831,915	05/25/2001	Thomas Daniel	208608US0PCT	2083
22850 7590 04/21/2009 OBLON, SPIVAK, MCCLELLAND MAIER & NEUSTADT, P.C. 1940 DUKE STREET ALEXANDRIA, VA 22314				
EXAMINER METZMAIER, DANIEL S				
ART UNIT		PAPER NUMBER		
1796				
NOTIFICATION DATE		DELIVERY MODE		
04/21/2009		ELECTRONIC		

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1 RECORD OF ORAL HEARING
2
3 UNITED STATES PATENT AND TRADEMARK OFFICE
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5
6 BEFORE THE BOARD OF PATENT APPEALS
7 AND INTERFERENCES
8

9
10 Ex parte THOMAS DANIEL,
11 ULRICH RIEGEL,
12 MATTHIAS WEISMANTEL,
13 NORBERT HERFERT,
14 and FRIEDRICH ENGELHARDT
15

16 Appeal 2009-1265
17 Application 09/831,915
18 Technology Center 1700
19

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21 Oral Hearing Held: March 19, 2009
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25 Before TERRY J. OWENS, MARK NAGUMO, and
26 JEFFREY B. ROBERTSON, Administrative Patent Judges.
27

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29 ON BEHALF OF THE APPELLANT:
30

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1 The above-entitled matter came on for hearing on Thursday,
2 March 19, 2009, commencing at approximately 12:59 p.m., at the U.S.
3 Patent and Trademark Office, 600 Dulany Street, Alexandria, Virginia,
4 before Kevin E. Carr, Notary Public.

5 MS. GRUNEBERG: Good afternoon. I just have a copy of the
6 brief for the court reporter. Give me one second to organize my documents.

7 Good afternoon again. May it please the Court, my name is
8 Kirsten Gruneberg, and I'm here on behalf of BASF AG from Germany.
9 What this patent application relates to are hydrogels, which are useful to
10 absorb aqueous fluids and can be used -- for example, super absorbents in
11 hygiene articles.

12 I would like to start to sort of give you just a little bit of a short
13 background of what this whole application is all about, and then I will talk
14 about the claims and go into the important issues.

15 So the specification at page 1, starting at line 16, talks about the
16 fact that polymers that are used for hydrogels can be post cross-linked,
17 meaning after the polymerization reaction, you have a cross-linking reaction,
18 and that is usually done to increase absorption capacity, gel strengths and
19 absorbency on the load.

20 Specification page 2, starting at line 11, talks about that the
21 known polymers that have so far been produced have a problem, and the
22 problem is that the permeability through a swollen gel is unsatisfactory. So
23 as a result, one of the objects of the invention in this case is to provide
24 hydrogels where the permeability in a swollen gel is enhanced. So that's
25 basically the background of why we are doing this.

1 The object that's achieved most notably and is described in the
2 specifications, starting at line 21, by the use of silicates which are added to
3 the hydrogel at a particular point in the process of making the hydrogel. It
4 can be before or after or during the polymerization, but it must be before
5 drying of the hydrogel. That is very important.

6 Also, I would like to draw your attention to the specification at
7 page 5, first and second paragraphs. They talk in general about the fact that
8 the polymers or the hydrogels, according to the invention, have improved
9 absorbency on the load, and it is attributed to the post cross-linking, and they
10 are harder and crystalline in character in the swollen state, and therefore less
11 sticky and have better fluid transportation or drainage.

12 Our claims, we have three independent claims. Claim 1 relates
13 to a hydrogel prepared by a specific process. Claim 10 relates to the
14 process. And Claim 18 also relates to hydrogel particles prepared by a
15 specific process. As I already outlined in my introductory remarks, one of
16 the important things is that in mixing of the polymerization mixture with an
17 alkali metal silicates occurs. One of the important details of Claim 18 is that
18 we are limiting this claim to the mixing of the solid gel. So Claim 1 is
19 arguably broader than Claim 18.

20 JUDGE NAGUMO: Where is the evidence in the
21 specification?

22 MS. GRUNEBERG: Excuse me?

23 JUDGE NAGUMO: Where is the evidence in the
24 specification?

25 MS. GRUNEBERG: For?

1 JUDGE NAGUMO: That there is irreversible changes upon
2 drying?

3 MS. GRUNEBERG: That there is irreversible changes?

4 JUDGE NAGUMO: Yes. You said that it was critical that the
5 silicate be added before drying.

6 MS. GRUNEBERG: Correct.

7 JUDGE NAGUMO: So where is the evidence that that is a
8 critical aspect?

9 MS. GRUNEBERG: Yes. We submitted a Rule 132
10 Declaration in this case on May 9, 2005 by Dr. Essig of BASF. He
11 measured the hydrogels. He did some SEM measurements and he found that
12 the silicates are uniformly distributed in the hydrogel upon producing them
13 by the process as we are claiming it.

14 JUDGE NAGUMO: Well, he doesn't say what process was
15 done to make that hydrogel, and also, it seems to me the critical micrograph
16 that shows -- that is supposed to show the distribution of silica is completely
17 featureless. So I don't think that this declaration is probative of much of
18 anything.

19 MS. GRUNEBERG: Okay. To address your first remark, what
20 I see the declaration states that the dried hydrogel according to the present
21 invention was investigated. So that, of course, refers to a hydrogel that was
22 made by the process as claimed.

23 JUDGE NAGUMO: Well, there are at least three different
24 methods of making this in Claim 1, for example.

25 MS. GRUNEBERG: Yes.

1 JUDGE NAGUMO: It isn't too hard to see how, perhaps if you
2 add it before polymerization starts, you might get a different result than
3 afterwards.

4 MS. GRUNEBERG: Okay.

5 JUDGE NAGUMO: The question here it seems to me is the
6 Examiner has shown a mixture where it's been added after drying and
7 apparently re-hydrated perhaps and said why is this different, show us how
8 the product in this product by process claim is different. I don't see any --
9 well, direct me to some evidence in the record and tell me where you've
10 argued it, that there is a difference.

11 MS. GRUNEBERG: Yes. We argued it, for example, in the
12 appeal brief, and I'm fully aware it's a product of process claim, so we have
13 to make a strong argument why is our product different from the product of
14 the prior art references. Now, in terms of -- so I'm basically looking at the
15 appeal brief starting at about page 6 in terms of those arguments.

16 Basically, in terms of the Procter & Gamble reference, those
17 mixtures don't refer to mixtures of particles with silicate; they actually refer
18 to having a silicate in a super absorbent article. So there is a distribution of
19 silicate in a real article. It doesn't refer to a minute particle that has silicate
20 distributed in it.

21 JUDGE NAGUMO: Well, that's what I'm asking. Why --
22 where is the evidence that, in fact, the materials are different? Where is the
23 evidence for example that the silicate cannot re-penetrate --

24 MS. GRUNEBERG: The particles?

25 JUDGE NAGUMO: -- a gel or particle that has been dried, and
26 now it's slow, and it has the silicate particles around it, why can't they enter

1 into the particle and be essentially indistinguishable from a product made by
2 one of these methods that you recite?

3 MS. GRUNEBERG: I believe our argument is as follows. You
4 seem to be also of the opinion that the Procter & Gamble reference has
5 already dried materials and they add the silicate afterwards. Are we in
6 agreement so far, perhaps?

7 JUDGE NAGUMO: This seems to be the argument that you've
8 made and I'm willing to accept that. For argument's sake, I want to know
9 why the two products are distinguished.

10 MS. GRUNEBERG: Okay. So if you have two dried particles
11 that you're mixing together, why would the silicate penetrate the polymer
12 particle that's already dried? I believe a person of ordinary skill in the art
13 would believe that that goes against -- you know, every science. Why would
14 -- unless you shoot it against it or something, I don't see any reason why the
15 silicate would penetrate the dried polymer particle as it is described in, for
16 example, the Procter & Gamble reference.

17 JUDGE ROBERTSON: Counselor?

18 MS. GRUNEBERG: Yes?

19 JUDGE ROBERTSON: I think what the Examiner relies on is
20 what mixing process of the dried particle -- the initially dried particle and the
21 silicate. So in a sense that -- it's not a mixing of two dried particles, but it's
22 a mixing under conditions that are allowing for a solution phase, a mixture
23 of the two particles.

24 So it's not just completely dried particles. You have a solvent
25 environment that's there.

1 MS. GRUNEBERG: I'm not entirely sure to which particle
2 you are referring. Our arguments, for example, in the brief at page 7 refer to
3 the Procter & Gamble material AGM, which is an absorbing -- absorbent
4 gelling material, and it's basically commercially available. So that would be
5 an already dried material. So I don't see where the solution step would
6 come in there.

7 JUDGE ROBERTSON: I'm looking at the Examiner's answer.

8 MS. GRUNEBERG: Okay.

9 JUDGE ROBERTSON: Let's see if I can -- on page 8.

10 MS. GRUNEBERG: Okay.

11 JUDGE ROBERTSON: The Examiner says, "Furthermore,
12 Trinh et al. discloses forming odor control granules for absorbing articles
13 comprising AGM zeolite in particulate form by adding water blending and
14 drying. Trinh et al. teaches gel formation, further teaches silica materials. It
15 is reasonable to conclude from these facts that said admits in processing
16 steps disclosing the P&G reference and further in view of Trinh, which
17 shows the state of the art wet processes are prior to drying and odor control
18 systems are themselves absorbent materials."

19 MS. GRUNEBERG: Yes. This particular argument of the
20 Examiner we addressed in the reply brief, and if you give me one second, I
21 can guide you to it.

22 JUDGE NAGUMO: Well, that argument was also basically
23 raised on the final rejection and the Examiner refers there to the Procter &
24 Gamble, the Procter & Gamble KCT publication. There are two. They talk
25 about these odor control systems, this is at page 6, can be manufactured by
26 conventional means, spray drying, spray mixing, agglomeration processes.

1 All of these suggest -- I think very strongly -- that, in fact, if the
2 AGM is provided as a dry material, by the time that you're talking about
3 spray drying it and spray mixing these things, or agglomerating these things,
4 you're now in a wet environment. So that goes back to my first question,
5 which was, is there any evidence of record that the hydrogels, after they've
6 been dried, undergo so irreversible change such that the Examiner is
7 incorrect that taking these materials and then spray drying them could not
8 possibly result in the same material?

9 I don't see any argument that's directed to this point, perhaps
10 other than the declaration, but the declaration doesn't address this issue
11 either directly. So I'm having trouble finding facts that would allow me to
12 conclude, okay, you've shown the Examiner erred. I wonder if you can help
13 me out there.

14 MS. GRUNEBRG: Okay. All right. Let me think about this
15 for a second.

16 Again, we believe that the declaration is sufficient to address
17 this point, and I also believe that we argued this point extensively in the brief
18 as well as a reply brief.

19 JUDGE NAGUMO: Well, let's go to the declaration, then.

20 MS. GRUNEBRG: Yes.

21 JUDGE NAGUMO: In figure 3 that we have in the record, the
22 third panel there, it's very unhelpful. Here it is. It's black. There's no -- it's
23 featureless.

24 MS. GRUNEBRG: Yes.

25 JUDGE NAGUMO: So we have no evidence to show what the
26 distribution of the silica is, number one. Number two, we don't know what

1 materials -- and I'm going to mispronounce his name, what materials the
2 declarant tested. So we have very little to go on in terms of saying that, yes,
3 there's evidence that the Examiner erred.

4 MS. GRUNEBERG: Yes. I understand what you're saying in
5 terms of the micrographs that you have. That could be a problem of the
6 scanning in. Obviously, we have very small features, and it will be rather
7 difficult to see if the scanning resolution is not very good, I think. While
8 this actually was filed electronically, but we also -- in order to file
9 electronically, we scanned in those documents. I think, you know, this
10 concern with the micrographs could certainly be addressed in a follow-up to
11 this proceeding.

12 In terms of the specific hydrogel composition that was used,
13 I'm noting your argument.

14 JUDGE NAGUMO: Perhaps you would like to summarize.

15 MS. GRUNEBERG: Well, again, we believe that the mixtures
16 that are shown by Procter & Gamble are dry mixtures and are not before
17 drying a polymerization mixture. Specifically, the AGM material is a
18 commercially available material which is already a dried hydrogel. So
19 mixing something with the dried hydrogel would result in a different
20 hydrogel than mixing a silica with a hydrogel that is not dried, whether it's
21 before polymerization, during or after polymerization, as long as it's not
22 dried.

23 That is the summary of the argument. Thank you very much.

24 Whereupon, at approximately 1:18 p.m., the hearing was
25 concluded.